CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-45
NPDES NO. CA0037851

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

LAS GALLINAS VALLEY SANITARY DISTRICT
SEWAGE TREATMENT PLANT
SAN RAFAEL, MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. Las Gallinas Valley Sanitary District, (hereinafter called the discharger) submitted a report of waste discharge dated November 27, 1984 for reissuance of NPDES Permit No. CA0037851.

2. The present discharge had the following characteristics in 1984:

Flow - Annual Average:	2.78 million gallons per day (MGD)
- Average Dry Weather Flow:	2.0 MGD
BOD (Annual Average):	21.7 milligrams per liter (mg/l) (1)
Suspended Solids (Annual Average):	17.4 mg/l (1)

(1) After plant upgrading, BOD averaged 6.1 mg/l and suspended solids averaged 6.4 mg/l (Jan. 1984 data).

3. The Discharger presently discharges treated wastewater from its sewage treatment plant into Miller Creek, a tributary to San Pablo Bay, a water of the State and United States (Site Map - Attachment A). Effluent is discharged through two nearby outfalls, the first at Latitude 38 deg. 01 min. 32 sec. and Longitude 122 deg. 30 min. 58 sec. and the second at Latitude 38 deg. 01 min. 36 sec. and Longitude 122 deg. 30 min. 45. sec.

   The Discharger's treatment plant was recently upgraded to produce an effluent with an average BOD concentration of 20 mg/l and average suspended solids concentration of 15 mg/l at flows up to 5.84 MGD. Treated effluent is discharged to Miller Creek only during the wet weather season from September 1 through May 31. A portion of the wet weather flow is diverted to a wildlife marsh and then discharged to Miller Creek at point 002; the remainder is discharged to the Creek at point 001. During the dry weather season, all wastewater is reclaimed by spray irrigating pasture land owned by the Discharger.

4. The discharge is presently governed by Waste Discharge Requirements, Order No. 80-22 adopted on April 15, 1980, which allows discharge into Miller Creek and San Pablo Bay.

5. The Board has adopted waste discharge requirements covering the dry weather reclamation in Order No. 80-16.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for the Miller Creek and South San Pablo Bay and discharge prohibitions.

7. The beneficial uses of Miller Creek and San Pablo Bay are:

   - Water contact recreation
   - Non-contact water recreation
   - Wildlife habitat
   - Preservation of rare and endangered species
   - Estuarine habitat
   - Warm fresh water and cold fresh water habitat
   - Fish spawning and migration
   - Industrial service supply
   - Shellfishing
   - Navigation
   - Commercial and sport fishing

8. The Basin Plan prohibits discharge of "(a)ny wastewater which has particular characteristics of concern to beneficial uses at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, deadend slough, similar confined water, or any immediate tributary thereof". (Page 4-4)

9. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 8 above when it can be demonstrated that:

   a) an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or

   b) a discharge is approved as part of a reclamation project. (Page 4-5)

10. An exception to the prohibitions referred to in Finding 8 is warranted because (1) the discharge is approved as part of a reclamation project and (2) an equivalent level of environmental protection for 10:1 dilution can be provided because the facility provides a tertiary effluent and an improved treatment reliability during the discharge period when the receiving water does not provide 10:1 dilution.

11. The Basin Plan requires total coliform in the discharge to be less than 2.2 MPN/100 ml (7-sample median) where the discharge does not receive an initial dilution of at least 10:1 and where significant public contact with the receiving water occurs (page 4-2). The discharger allows public access to the levee pathway adjacent to Miller Creek. There is thus potential for public contact with receiving waters in Miller Creek, especially during the higher-use summer months. During the wet weather months a less stringent standard is justified by the following factors: fewer visitors are expected, and the discharger has proposed measures that will minimize public contact with receiving waters.

12. An Operations and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, operating strategies, process control monitoring, and maintenance activities.

13. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

14. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity to submit their written views and recommendations.

15. The Board, in a properly-noticed public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the Discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection system and pump stations tributary to the treatment plant is prohibited.

2. The average dry weather flow shall not exceed 2.92 mgd. Averages shall be determined over three consecutive dry weather months each year.

3. The discharge of wastewater to waters of the State from June 1 through August 31 is prohibited. The Executive Officer may grant requested date extension when yearly rainfall is abnormally high.

B. Effluent Limitations

1. The waste as discharged to waters of the State shall meet the following limitations:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Annual (1) Average
a. BOD or	mg/l	20	25	30	
Carbonaceous BOD	mg/l	15	18	20	
b. Suspended Solids	mg/l	15	18	20	
c. Grease and Oil	mg/l	5		15	
d. Total Ammonia as N	mg/l	6.0			4.0
e. Settleable Solids	ml/l-hr	0.1	0.2		

(1) Annual average shall be calculated as the average of 30-day averages for the months during which discharge is made to waters of the State.

f. Total Coliform:

At some point in the treatment process the effluent shall not exceed a median most probable number (MPN) of coliform organisms of 2.2 per 100 milliliters as determined from the results of the previous consecutive 7 days for which analyses have been completed. Any single sample shall not exceed 240 MPN/100 ml when verified by a repeat sample taken within 48 hours.

g. Chlorine residual shall have an instantaneous maximum of 0.0 mg/l) This limitation shall apply to discharges of effluent both to Miller Creek and to the wildlife pond.

h. The pH shall not exceed 8.5 nor be less than 6.5.

i. TOXICITY:

The survival of test organisms acceptable to this Board in 96-hour bioassarys of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

j. The arithmetic mean of the biochemical oxygen demand (5 day, 20°C) and suspended solids values, by weight, for effluent samples collected in period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).

2. During the wet weather period of November 1 through April 15, the final effluent limitation B.1. will be revised as follows:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum
a. BOD or	mg/l	30	45	60
Carbonaceous BOD	mg/l	25	38	50
b. Suspended Solids	mg/l	30	45	60
c. Grease and Oil	mg/l	10		20

d. Total Coliform:

Total coliform limitation will depend on daily flow. On wet-weather days when daily flow exceeds twice the average dry weather flow (1), the total coliform bacteria count for a median of 5 consecutive samples of effluent shall not exceed 240 MPN/100 ml at some point in the treatment process (2). Any single sample shall not exceed 10,000 MPN/100 ml when verified by a repeat sample taken within 48 hours.

On days when daily flow is below this level, the effluent shall not exceed a median most probable number (MPN) of coliform organisms of 23 per 100 milliliters as determined from the results of the previous consecutive 7 days for which analyses have been completed. Any single sample shall not exceed 1000 MPN/100 ml when verified by a repeat sample taken within 48 hours.

(1) Average dry weather flow is to be calculated from the most recent dry-weather flow data. Wet weather days are those when the instantaneous flows exceed twice the current dry weather average daily flows for more than 8 hours.

(2) Only samples taken during the current reporting month are to be used in calculating this median. There may be fewer than such samples in some wet-weather months.

3. Representative samples of the effluent shall not exceed the following limits:(1)

Constituent	Unit of Measurement	6 Month Median	Daily Maximum
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons (2)	mg/l	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

a. Floating, suspended, or deposited macroscopic particulate matter or foam;

b. Bottom deposits or aquatic growths;

c. Alteration of temperature, turbidity, apparent color or dissolved sulfide concentrations beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

f. Aquatic growths that result in nuisance or that adversely affect beneficial uses.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the state in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Median of any three consecutive samples shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration oxygen.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The Discharger shall comply with all sections of this Order immediately upon adoption.

2. This Order supersedes the requirements prescribed in Order No. 80-22. Order No. 80-22 is hereby rescinded.

3. Where concentration limitations in mg/l are contained in this permit, the following mass emmission limitations shall also apply as follows:

Mass Emission limit in lbs/day, kg/d = Concentration limit in mg/l x 8.34, 3.79 x Actual Flow in mgd averaged over the time interval to which the limit applies.

4. The Discharge shall review and update his Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed shall be submitted to the Regional Board by April 15 of each year. A time schedule for completion of the initial revision shall be submitted by June 15, 1985. Documentation of operator input and review shall accompany each annual update.

5. The Discharger shall review and update by January 15 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

7. The discharger shall undertake the following measures to reduce the likelihood of public contact with Miller Creek receiving waters:

   - Post signs at regular intervals along the levee pathway adjacent to Miller Creek. The signs should inform the public of the presence of treated wastewater and advise against public contact.

   - Erect fencing at locations where pedestrian access from the pathway to Miller Creek is readily available in order to discourage public contact.

8. Effluent discharged to the wildlife pond from September 1 through May 31 shall meet all requirements prescribed in this Order. During the reclamation period, effluent discharged to the wildlife pond shall meet the reclamation requirements prescribed in a separate order, except for residual chlorine (see B.1.g). No discharge to the wildlife pond shall be made when flows to the treatment plant exceed 6 million gallons per day.

9. Effluent in storage ponds may be discharged through the outfall from September 1 through May 31 only when the discharger receives written approval of the Executive Officer after demonstrating to his satisfaction that such discharge:

   - is necessary for prudent operation and maintenance of the storage and irrigation facilities.

   - will be made in a way that has the least adverse effect on the environment; and

   - has received the treatment required in the reclamation requirements.

10. The discharge shall promote and encourage increased reclamation to reduce the amount of discharge to San Pablo Bay during the period from September 1 through May 31.

11. In reviewing compliance with Effluent Limitations B.1.j and B.2.d of this Order, the Board will take special note of the difficulties encountered in achieving compliance during periods of high wet weather flow.

12. The Discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except A.12 and B.3. Item C.2 of the Standard Provisions shall read as follows: The "30-day or 7-day average" consecutive calendar day periods, respectively, divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the 30-day or 7-day, average discharge shall be determined by the summation of all the measured discharges by weight divided by the number of days during the 30 or 7 consecutive calendar day period when the measurements were made. For other than 7-day or 30-day periods, compliance shall be based on the average of all measurements made during the specified period.

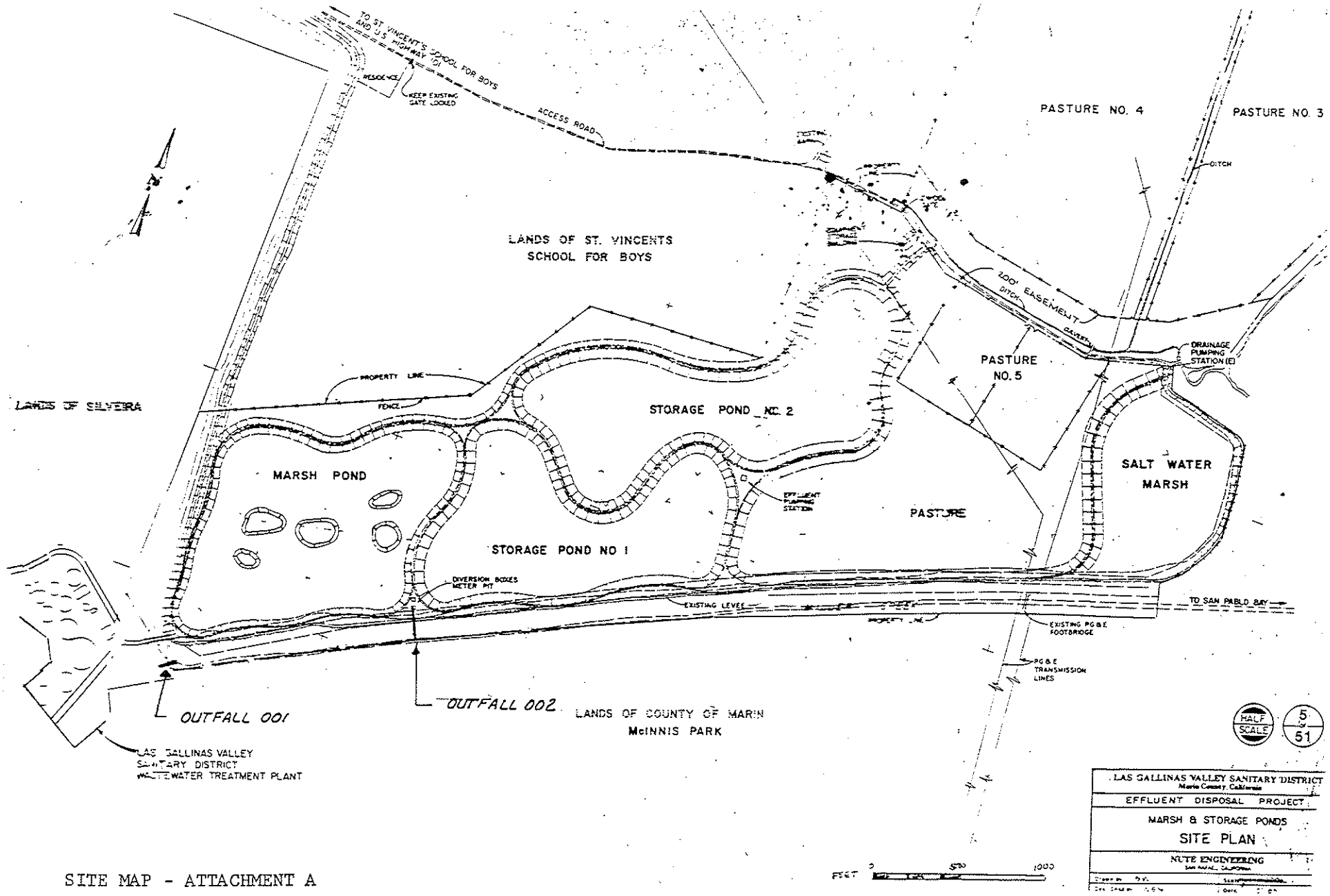
13. This Order expires April 17, 1990. The discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

14. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 30, 1985.

ROGER B. JAMES
Executive Officer

Attachments:
Standard Provisions and Reporting
Requirements and Definitions dated April 1977
Self-Monitoring Program



SITE MAP - ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Las Gallinas Valley Sanitary District

Sewage Treatment Plant

San Rafael, Marin County

NPDES NO. CA0037851

ORDER NO. 85-45

CONSISTS OF

PART A

AND

PART B

LAS GALLINAS VALLEY SANITARY DISTRICT

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall between the point of discharge and the point at which all tributary to the outfall is present and at which all treatment has been completed.
E-001-D	At any point in the disinfection facilities for Waste 001 at which point adequate contact with the disinfectant is assured. (May be coincident with E-001)

C. RECEIVING WATERS

Station	Description
C-1	At a point in Miller Creek, located within 20 feet down current from the discharge point 001.
C-2	At a point in Miller Creek, located within 20 feet down current from discharge point 002.
C-3	At a point in Miller Creek, located 1000 feet east of discharge point 002.
C-4	At a point in Miller Creek, located 2,000 feet east of discharge point 002.

D. LAND OBSERVATIONS

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

L-1 through L-'n'	Located at the corners and midpoints of the perimeter levee of storage ponds and wildlife pond. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
O-1 through O-'n'	Bypass or overflows from manholes, pump stations or collection systems

NOTE: Bypass shall be reported to this Regional Board by telephone immediately after occurance.

A written report shall be filed with the Board within 5 working days which shall contain information such as quantity involved, location, course of bypass, nature of affects, and corrective measures taken.

II. SCHEDULE OF SAMPLING MEASUREMENTS AND ANALYSIS

The schedule of sampling, measurements and analysis shall be that given in Table I.

III. MODIFICATIONS TO "PART A"

A. This monitoring program does not include the following sections of Part A, dated January 1978: C.3, C.4.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 85-45.

2. Is effective on the date indicated below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date April 30, 1985

Attachments: Table I
Form A

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001		E-001-D			All(3) C	All P	All L	All O
TYPE OF SAMPLE	C-24	G	C-24	G	C-24	Cont	G	O	O	O
Flow Rate (mgd)	D		D							
BOD, 5-day, 20°C, or COD (mg/l & kg/day)	3/W		3/W							
Chlorine Residual & Dosage (mg/l)				2H	or	Cont				
Settleable Matter (ml/l-hr.)		D								
Total Suspened Matter (mg/l & kg/day)	3/W		3/W							
Oil and Grease (mg/l & kg/day)	(1) M		(1) M							
Coliform (Total) (MPN/100 ml) per req't				(2) 3/W						
Fish Tox'y 96-hr. TL % Surv'l in undiluted waste			M							
Ammonia Nitrogen (mg/l & kg/day)			M				Q			
Nitrate Nitrogen (mg/l & kg/day)										
Nitrite Nitrogen (mg/l & kg/day)										
Total Organic Nitrogen (mg/l & kg/day)										
Total Phosphate (mg/l & kg/day)										
Turbidity (Jackson Turbidity Units)		M					Q			
pH (units)		D					Q			
Dissolved Oxygen (mg/l and % Saturation)		D					Q			
Temperature (°C)		D					Q			
Apparent Color (color units) or visual		M					Q			
Secchi Disc (inches)										
Sulfides (if DO<2.0 mg/l) Total & Dissolved (mg/l)		W					Q			
Arsenic (mg/l & kg/day)			Q							
Cadmium (mg/l & kg/day)			Q							
Chromium, Total (mg/l & kg/day)			Q							
Copper (mg/l & kg/day)			Q							
Cyanide (mg/l & kg/day)			Q							
Silver (mg/l & kg/day)			Q							
Lead (mg/l & kg/day)			Q							

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001		E-001-D			All(3) C	All P	All L	All O	
TYPE OF SAMPLE	C-24	G	C-24	G	C-24	Cont	G	O	O	O	
Mercury (mg/l & kg/day)			Q								
Nickel (mg/l & kg/day)			Q								
Zinc mg/l & kg/day)			Q								
Phenolic Compounds (mg/l & kg/day)			Q								
All Applicable Standard Observsations							M	2W	2W	E	
Bottom Sediment Analyses and Observations											
Total Ident. Chlor. Hydro-carbons (mg/l & kg/day)			Q								

LEGEND FOR TABLE

TYPES OF SAMPLES

C = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-intergrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwaters stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

FOOTNOTES TO TABLE I

(1) Oil and grease sampling shall consist of 3 grab samples taken at equal intervals during the sampling day, with each grab being collected in a glass container. A composite shall be made using equal volumes of each grab. Each glass container used for sample collection or mixing shall be throughly rinsed with solvent as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.

(2) During periods when the Discharger uses reclaimed water, the frequency of coliform sampling of plant effluent will be increased, as specified in separate self-monitoring requirements for reclaimed water use.

(3) Receiving water samples should be collected within two hours after a high tide.